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Theodore P. Cummings, P.S.C. 40,973  
 Name of Attorney Registration No.  
 Signature of Attorney

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P&G Case 8094M



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the Application of :  
 Stephen Paul Zimmerman et al. : Confirmation No. 6704  
 Serial No.: 09/865,074 : Group Art Unit: 1761  
 Filed: May 24, 2001 : Examiner: Tran Lien, Thuy  
 For: TORTILLA CHIPS WITH CONTROLLED SURFACE BUBBLING

**SUPPLEMENTAL APPEALS BRIEF**

Mail Stop Appeal Brief - Patents  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 2233-1450

Dear Sir:

On May 5, 2004, the Examiner mailed a Non-final Office Action in response to Appellants' Brief. Submitted herewith is a request under 37 CFR § 1.193(b)(2)(ii) to reinstate the present Appeal. This Supplemental Brief is submitted in support of that request. Applicants hereby re-instate their appeal to the Board of Appeals the decision of the Examiner rejecting Claims 21-33. A response to the fourth office action dated 5/5/04 was not filed.

**Real Party in Interest**

The real party in interest is the Procter & Gamble Company, assignee of Appellants' entire right, title, and interest in the invention at issue.

**Related Appeals and Interferences**

Appellants' first appellate brief was filed on February 9, 2004. This Supplemental Brief coupled with Appellants' request to re-instate their appeal are filed herein. Appellants, Appellants' legal representative, and Appellants' assignee are not aware of any other appeals or interferences which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

**Status of Claims**

Claims 21-33 are pending in the case and are the subject of this appeal.

**Status of Amendments**

No amendments have been filed subsequent to the rejection dated either 9/5/03 or 5/5/04.

**Summary of Invention**

The present invention provides a snack chip made from a dough composition. The dough composition comprises from about 50% to about 80% of a blend comprising, (i) at least about 50% of a precooked starch-based material, and (ii) at least about 0.5% pregelatinized starch having very specific properties, as discussed *infra*. The dough composition also comprises from about 30% to about 60% total water. (Claim 21)

The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip. (Specification, p. 11, lines 17-18) By careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) In traditional tortilla making, however, the dough must be baked before it is fried to achieve the desired qualities. (Specification, p. 17, lines 3-12)

A key factor of the present invention is the required pregelatinized starch. The addition of the pregelatinized starch required by the present invention enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; see p. 17, lines 3-12 for a description of the traditional baking process and it's purpose) The pregelatinized starch of the present invention is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16. (Claim 21)

**Issues**

- I. Whether Claims 21-23, 25, 27 and 33 are patentable over the Examiner's 35 U.S.C. §103(a) rejection under Willard (U.S. Patent No. 4,623,548).
- II. Whether Claims 24, 26 and 28-32 are patentable over the Examiner's 35 U.S.C. § 103(a) rejection under Willard (U.S. Patent No. 4,623,548) in view of Holm (U.S. Patent No. 4,994,295).

**The Argument**

- I. **Whether Claims 21-23, 25, 27 and 33 are patentable over the Examiner's 35 U.S.C. §103(a) rejection under Willard (U.S. Patent No. 4,623,548).**

Claims 21-23, 25, 27 and 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over Willard (U.S. Patent No. 4,623,548--hereinafter, Willard '548). Independent claim 21, and claims 22-23, 25, 27 and 33 which are dependent therefrom, require, *inter alia*, pregelatinized starch that is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16.

To establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); MPEP §2143.03. Thus, in the present case, the Examiner must show that the art teaches or suggests a snack chip made from a dough comprising pregelatinized starch that is **at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16**. This the Examiner has not done. The Examiner has not identified any sections of Willard or Holm that teach or suggest a pregelatinized starch having the required characteristics. Thus, the obviousness rejection is improper and should be reversed.

Obviousness can only be established by modifying reference teachings to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1491 (Fed. Cir. 1992). In the present case, the Examiner has not identified any teaching, suggestion, or motivation, or knowledge in the art that would motivate one to modify the references to make a snack from a dough comprising pregelatinized starch having the recited properties. Thus, the obviousness rejection is improper and should be reversed.

As disclosed in the Specification, by careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) A key factor is the addition of the recited pregelatinized starch. The addition of this pregelatinized starch, a key formulation change, enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and it's purpose) The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip (Specification, p. 11, lines 17-18) without being subjected to baking before frying.

Willard '548 fails to recognize that % pregelatinization, viscosity, or WAI of pregelatinized starch are important, result-effective variables for making such a chip, and that the

recited parameters enable the making of such a chip without baking before frying. Although Willard '548 fails to recognize the importance of using a pregelatinized starch having the recited % pregelatinization, viscosity, or WAI to make a bubbly chip that does not require a baking step before frying, the Examiner nonetheless concludes that the present invention would have been obvious in view of Willard '548.

In discussing % pregelatinization, the Examiner seems to conclude that because no range is stated in Willard, all ranges are thus disclosed by Willard '548. The Examiner states:

While Willard does not disclose the percent of gelatinization of the pregelatinized starch, the degree of gelatinization of the pregelatinized starch can be from above 0-100% and **by not disclosing the percent gelatinization, the pregelatinized starch encompasses this range** and the claims include the range of 50-100%.

(9/5/03 Office Action, p. 2, *emphasis added*)

The Examiner's assertions do not explain the fact that 1) Willard '548 does not recognize that different pregelatinized starches can have various degrees of gelatinization, and 2) that Willard '548 does not recognize that the degree of gelatinization of the pregelatinized starch is an important variable for producing a bubbly snack that can be made without a baking step. Although Willard '548 completely misses these two important elements, the Examiner asserts that one of skill in the art would nonetheless somehow be motivated to formulate a snack chip comprising pregelatinized starch having the recited % gelatinization. Because the Examiner has provided no motivation to modify Willard '548 to arrive at the recited % pregelatinization, the rejection is improper and should be reversed.

Similarly, the Examiner states that Willard '548 does not disclose the viscosity of the pregelatinized starch. (9/5/03 Office Action, p. 2) The Examiner has concluded that starch viscosity is related to the degree of gelatinization, and by teaching pregelatinized starch:

It would have been within the skill of one in the art to have a degree of gelatinization which would give a viscosity that gives the most optimum working parameters with respect to dough manipulation. Optimization is within the skill of one in the art. (9/5/03 Office Action, pp. 3-4)

This does not explain why, in view of the fact that Willard '548 does not recognize that viscosity of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited viscosity parameters. The Examiner states

that "optimization is within the skill of one in the art," but does not set forth any evidence that one skilled in the art would recognize that pregelatinized starch viscosity is an important or result-effective variable for producing a bubbly snack without baking. Thus, there has been shown no motivation to modify Willard '548 to require any particular pregelatinized starch viscosity to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

As for WAI, the Examiner concludes that:

Willard discloses the same starch and the degree of gelatinization encompasses the claimed range; thus it is obvious the water absorption index of the starch can fall within the range claimed. In any event, it would have been obvious to one skilled in the art to use a starch having an WAI which would give the most optimum working parameters and properties. (9/5/03 Office Action, p. 4, *emphasis added*)

This does not explain why, in view of the fact that Willard '548 does not recognize that WAI of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited WAI parameter. Furthermore, the Examiner provides no basis for concluding that Willard '548 discloses the "same" starch, since Willard '548 does not disclose the recited pregelatinized starch of the present invention.

The Examiner also states that it would have been obvious nonetheless to use a starch with the recited WAI to "give the most optimum working parameters and properties." Because the Examiner has not set forth any evidence that one skilled in the art would recognize that pregelatinized starch WAI is a result-effective variable for producing a bubbly snack without baking, this conclusion is improper. Thus, there has been shown no motivation to modify Willard '548 to require any particular pregelatinized starch WAI to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

The references do not teach or suggest the claimed invention, and there is no suggestion for modifying reference teachings to produce the claimed invention. Accordingly, the Examiner's rejection is improper and should be reversed.

**II. Whether Claims 24, 26 and 28-32 are patentable over the Examiner's 35 U.S.C. § 103(a) rejection under Willard (U.S. Patent No. 4,623,548) in view of Holm (U.S. Patent No. 4,994,295).**

Claims 24, 26 and 28-32 are patentable under § 103(a) over Willard '548 in view of Holm (U.S. Patent No. 4,994,295--hereinafter, Holm '295). Claims 24, 26 and 28-32 depend from independent Claim 21.

For all of the reasons noted above for the Examiner's rejection of Claims 21-23, 25, 27 and 33 under 35 U.S.C. § 103(a) over Willard '548, Appellants respectfully assert that the Willard/Holm combination fails to teach, suggest or make obvious Appellants' Claims 24, 16 and 28-32.

Furthermore, Appellants further assert that the Willard/Holm combination fails to teach or suggest Appellants' claims herein, because the combination, through Holm '295, teaches the production of controlled surface bubbling fabricated snack products by use of Holm's three-step process only. This process involves formation of dough pieces or performs, drying of dough performs, and frying of dough performs. (Holm '295, Column 5, lines 6-9; Abstract) The purpose of drying is to produce a relatively dry chip surface with a relatively moist inner portion. (Holm '295, Column 7, lines 61-65) Drying can include methods such as heat (e.g., baking) and/or high volume air movement. (Holm '295, Columns 8-9) In discussing the selection of process conditions, Holm '295 notes the following "well-known relationship"; that "[i]ncreased surface drying usually results in increased (and heretofore undesired) bubbling." (Holm '295, Column 9, lines 51-62)

While the Willard/Holm combination requires additional processing, Appellants invention requires no extra process step (i.e., drying and/or baking). More specifically, the chip formulation of the current invention does not require "increased surface drying," as Holm '295 suggests would be necessary, to result in a chip with the desired level of surface bubbling. Rather, the key variable in the present invention is the starch composition, a formulation add. The addition of the pregelated starch of the current invention enables improved surface bubble development and texture expansion, and also permits the omission of the baking step (or any drying step) that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and it's purpose)

Moreover, because neither reference in the Willard/Holm combination recognizes that the % pregelatinization, viscosity values, or WAI parameters of pregelatinized starch are result-effective for formulating a bubbly snack that can be made without baking by frying, one would not reasonably expect that the claimed invention would result from modifying the references. Claims may be rejected only when there is a reasonable expectation of success that the claimed invention will result. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus, in this case, the rejection of the claims is improper and the rejection should be reversed.

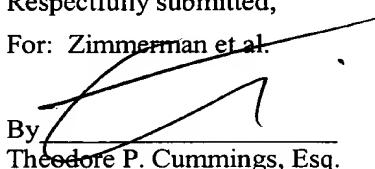
There is nothing to indicate that any of the cited references contemplated making a bubbly snack that does not require baking before frying by formulating a snack comprising a pregelatinized starch having any particular % pregelatinization, viscosities, or WAI values, much less the values recited. In fact, Appellants contend that the Willard/Holm combination teaches away from the present invention, because Holm '295 teaches bubble control by *process parameters* (Holm '295, Column 1, lines 14-15), whereas the current invention relies upon *composition parameters* (pregelatinized starch properties). Thus, based on either Willard '548 or Holm '295, one of skill in the art would not be motivated to make a bubbly chip by modifying the formulation of the Willard/Holm combination, but rather by modifying process parameters of that combination. Furthermore, Holm '295 teaches that increased surface drying, a process step, usually results in increased bubbling (Holm '295, Column 9, lines 61-62), whereas the present invention does not require drying (e.g. baking) before frying. Thus, based upon the teaching of Holm '295 (as combined with Willard '548), one of skill in the art would not be motivated to make a bubbly chip by modifying the formulation, but rather by adding another process step for drying the surface of the dough.

### Conclusion

For the reasons set forth above, Appellants submit that the Examiner has not established the *prima facie* case of obviousness and that the present invention is patentable over the cited references. Accordingly, reversal of the Examiner's finding of unpatentability is respectfully requested.

Respectfully submitted,

For: Zimmerman et al.

By   
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Date: October 25, 2004

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**Appendix**

[Claims 1-20 have been canceled.]

21. A snack chip, wherein said snack chip is made from a dough composition comprising:
  - a. from about 50% to about 80% of a blend comprising:
    - i. at least about 50% of a precooked starch-based material;
    - ii. at least about 0.5% pregelatinized starch, wherein said pregelatinized starch is at least about 50% pregelatinized, and further wherein said pregelatinized starch has a peak viscosity of from about 1500 cp to about 4600 cp; a final viscosity of from about 300 cp to about 2700 cp; and a water absorption index of from about 12 to about 16; and
  - b. from about 30% to about 60% total water.
22. The snack chip of Claim 21, wherein said blend comprises from about 40% to about 95% corn masa flour.
23. The snack chip of Claim 22, wherein said snack chip is uniformly shaped.
24. The snack chip of Claim 23, wherein said snack chip has raised surface features, wherein said raised surface features comprise:
  - a. from about 12% to about 40% large surface features;
  - b. from about 20% to about 40% medium surface features; and
  - c. from about 25% to about 60% small surface features.
25. The snack chip of Claim 24, wherein said snack chip has:
  - a. a glass transition temperature of from about 165 to about 275°F at a snack chip relative humidity of from about 2 to about 4%;
  - b. a glass transition temperature of from about 180 to about 275°F at a snack chip relative humidity of from about 6 to about 9%; and
  - c. a glass transition temperature of from about 150 to about 235°F at a snack chip relative humidity of from about 20 to about 30%.
26. The snack chip of Claim 25, wherein:
  - a. the average thickness of said snack chip is from about 1 mm to about 3 mm;
  - b. the average thickness of raised surface features is from about 2.3 mm to about 3.2 mm;

- c. the maximum thickness of the chip is less than about 5.5 mm; and
- d. the coefficient of variation of the chip thickness is greater than about 15%.

27. The snack chip of Claim 26, wherein the coefficient of variation of said snack chip thickness is from about 15% to about 40%.

28. The snack chip of Claim 27, wherein said snack chip comprises from about 5 to about 35 surface features per gram of snack chip.

29. The snack chip of Claim 28, wherein said snack chip has a surface roughness of from about 1.5 to about 7 mm.

30. The snack chip of Claim 29, wherein said snack chip has a bubble wall thickness of greater than about 0.1 mm.

31. The snack chip of Claim 30, wherein said snack chip has a total volume occupied by solids greater than about 45%.

32. The snack piece of Claim 31, having interior voids with a length of from about 1 to about 12 mm, and a height of from about 0.2 to about 2.5 mm.

33. The snack chip of Claim 32, wherein said snack chip has a maximum thickness of from about 3 mm to about 5.5 mm.

**FEE TRANSMITTAL**  
**for FY 2005**

Patent fees are subject to annual revision.



TOTAL AMOUNT OF PAYMENT (\$ 980.00)

**Complete if Known**

Application Number	09/865,074
Confirmation Number	6704
Filing Date	May 24, 2001
First Named Inventor	Zimmerman, et al.
Examiner Name	Thuy Tran Lien
Art Unit	1761
Attorney Docket No.	8094M

TOTAL AMOUNT OF PAYMENT (\$ 980.00)

Attorney Docket No. 8094M

**METHOD OF PAYMENT**

1.  The Director is hereby authorized to charge indicated fees submitted on this form, credit any over payments, and charge any additional fee(s) during the pendency of this application to:

Deposit Account Number: 16-2480

Deposit Account Name: The Procter &amp; Gamble Company

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Code	(\$)	Fee Description	Fee Paid
1051	130	Surcharge-late filing fee or oath	<input type="checkbox"/>
1052	50	Surcharge-late provisional filing fee or cover sheet	<input type="checkbox"/>
1053	130	Non-English specification	<input type="checkbox"/>
1812	2,520	For filing a request for <i>ex parte</i> reexamination	<input type="checkbox"/>
1804	920*	Requesting publication of SIR prior to Examiner's action	<input type="checkbox"/>
1805	1,840*	Requesting publication of SIR after Examiner's action	<input type="checkbox"/>
1251	110	Extension for reply within 1 <sup>st</sup> month	<input type="checkbox"/>
1252	430	Extension for reply within 2 <sup>nd</sup> month	<input type="checkbox"/>
1253	980	Extension for reply within 3 <sup>rd</sup> month	<input checked="" type="checkbox"/>
1254	1,530	Extension for reply within 4 <sup>th</sup> month	<input type="checkbox"/>
1255	2,080	Extension for reply within 5 <sup>th</sup> month	<input type="checkbox"/>
1401	340	Notice of Appeal	<input type="checkbox"/>
1402	340	Filing a brief in support of an appeal	<input type="checkbox"/>
1403	300	Request for oral hearing	<input type="checkbox"/>
1451	1,510	Petition to institute a public use proceeding	<input type="checkbox"/>
1452	110	Petition to revive - unavoidable	<input type="checkbox"/>
1453	1,370	Petition to revive - unintentional	<input type="checkbox"/>
1501	1,370	Utility issue fee (or reissue)	<input type="checkbox"/>
1502	490	Design issue fee	<input type="checkbox"/>
1460	130	Petitions to the Commissioner	<input type="checkbox"/>
1807	50	Processing fee under 37 C.F.R. 1.17(q)	<input type="checkbox"/>
1806	180	Submission of Information Disclosure Statement	<input type="checkbox"/>
1809	790	Filing a submission after final rejection (37 CFR § 1.129(a))	<input type="checkbox"/>
1810	790	For each additional invention to be examined (37 CFR § 1.129(b))	<input type="checkbox"/>
1801	790	Request for Continued Examination (RCE)	<input type="checkbox"/>
1802	900	Request for expedited examination of a design application	<input type="checkbox"/>
1454	1,370	Acceptance of unintentionally delayed claim for priority under 35 U.S.C. 119, 120, 121, or 365 (a) or (c)	<input type="checkbox"/>
Other fee (specify) _____			<input type="checkbox"/>
Other fee (specify) _____			<input type="checkbox"/>

\* Reduced by Basic Filing Fee Paid

SUBTOTAL(3) (\$ 980)

SUBTOTAL (2) (\$ 0)

**SUBMITTED BY**

Name (Print/Type)	Theodore P. Cummings	Registration No. (Attorney/Agent)	40,973	Telephone	(513) 634-1906
Signature				Date	10/25/2004

This collection of information is required by 37 CFR 1.17. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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10/28/2004 FFANAIAP 00000049 162480 09865074

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